



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,387	12/20/2001	Patrick V. Bonsignore	6037-001	2155

7590 06/09/2005

ROSENBAUM & ASSOCIATES, P.C.  
650 Dundee Road  
Suite # 380  
Northbrook, IL 60602

EXAMINER

GREEN, ANTHONY J

ART UNIT PAPER NUMBER

1755

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/027,387

Applicant(s)

BONSIGNORE ET AL.

Examiner

Anthony J. Green

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2005.  
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-17 is/are rejected.  
7) ☒ Claim(s) 13 and 18-26 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. This office action is in response to the amendment submitted on 11 April 2005. Based on applicant's acceptable terminal disclaimer, the previously made obviousness-type double patenting rejection has been overcome. Applicant is reminded that terms already present in the claim should not be underlined when the claim is amended. Note that in claim 1 applicant has underlined the term "of" when this term was present in the original claim. Failure to properly amend the claims could result in a letter of non-compliance in the future.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 7-10, 13, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Anderson, Jr. et al (US Patent No. 5,095,769).

The reference teaches, in the examples, boron nitride particles having a particle size of from 0.01 to 44 microns diameter which are coated with an organotitanate coupling agent and then dispersed into a poly (alpha-olefin) carrier.

The instant claims are met by the reference as the reference teaches a composition that encompasses that which is instantly claimed. As for the heat transfer

Art Unit: 1755

medium it is the position of the examiner that the poly (alpha-olefin) carrier of the reference meets the instantly claimed heat transfer medium absent evidence showing otherwise thus meeting claim 1. As for the limitations of claims 2-3 these are believed to be inherent properties possessed by the coupling agent coating as coupling agents are usually applied to particles to aid in their dispersion. As for claim 4 it is the position that since the composition is positioned in typical semiconductor packages this limitation is met. As for claim 5 since the composition is mixed into the carrier it is suspended in the heat transfer medium. As for claim 7 this is believed to be an inherent property resulting from the application of the coupling agent. As for claims 8-10 the particle size of the powder is clearly within the range. As for claim 13 the carrier is believed to meet this limitation. As for claim 17 the poly (alpha olefin) of the reference is encompassed by many of the members of this grouping absent evidence showing otherwise.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6, 11-12 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson, Jr. et al (US Patent No. 5,095,769).

The reference was discussed previously. Further the reference teaches that thermal filler particles are usable (see column 4, lines 32+).

The instant claims are obvious over the reference. As for claim 6 it is the position that the manner in which the coating is applied is a matter of obvious choice or design as one of ordinary skill in the art knows various methods to apply coatings to powders and it is believed that the manner in which the coating is applied does not produce any unexpected results. As for claims 11-12 since the reference teaches the use of thermal filler particles one would find it obvious to utilize other particles for the particles of the reference without producing any unexpected results. As for claims 14-16 while it does not teach that the poly (alpha olefin) is an interpolymers it is believed that this is a matter of obvious choice or design best determinable through routine experimentation within the art as the reference does not specifically recite how the poly (alpha olefin) material is manufactured therefore one would find it obvious to use any well known manufacturing method to produce it absent evidence showing otherwise.

#### ***Claim Objections***

6. Claim 13 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim, or amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form.

It is not seen as to how this claim further limits claim 1 as claim 1 recites that the heat transfer medium is selected from monomers, interpolymers, polymers and phase change materials.

***Allowable Subject Matter***

7. Claims 18-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

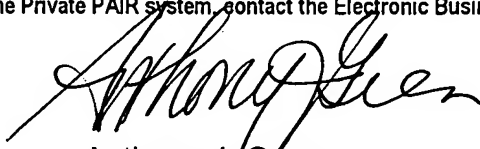
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Green whose telephone number is 571-272-1367. The examiner can normally be reached on Monday-Thursday 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1755

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Anthony J. Green  
Primary Examiner  
Art Unit 1755

ajg  
May 31, 2005